

SEA TURTLE LIFE HISTORY FORM

12/04

INTRODUCTION

The Sea Turtle Life History Form is used for recording biological data on sea turtles. These data will be used to determine the number, species, size and condition of sea turtles involved in the fishery. Other data are recorded on the movements and preferred habitats of the various populations of sea turtles. These data are critical to the development of conservation and recovery strategies for these marine reptiles.

GENERAL INSTRUCTIONS

Complete a Sea Turtle Life History Form for every turtle brought aboard or released along side of the vessel. If you are unable to positively identify the species, try to take photographs and record it on the data sheet as “unknown”. Also, try to photograph all hooked or entangled sea turtles that are not brought aboard due to their large size or due to safety considerations. Record tag data if tags are present. Also, you may be requested to take biological samples.

While turtles should be worked up and returned to the water as soon as possible (unless resuscitated), in order to continue your other observer duties, you may need to put the turtle safely aside and work it up later. If the animal has gear attached, the gear should be removed immediately, as the severity of the interaction can increase with prolonged exposure to the gear.

We have tried to minimize the amount of writing required. If given a choice, circle the answer to a question or check the appropriate box. Some boxes require a written response.

CAPTURE INFORMATION

Trip Number: Record the unique number assigned by the Observer Program Coordinator.

Year, Month, Day: Record the year, month, and day of the recovery of the animal.

Set / Haul / Tow: Record the set, haul, or tow number of the trip.

Specimen Number: Record a three digit consecutive number. Your turtle specimen numbers on this trip begin with 001 and continue sequentially. Turtle specimen numbers are kept separate from all other specimen numbers for other species groups.

Gear Type: Indicate which gear is being fished. If gear is something other than the listed types, write in gear type.

Gear Depth: Indicate whether the gear was being fished at the surface, midwater, or on the bottom.

Time: Record the time of day (24 hr clock) when the turtle was brought alongside the vessel.

Water Temperature: Record the water temperature at the location where the turtle was brought alongside the vessel.

Latitude: Record the degrees and minutes of latitude at the time of the actual recovery of the animal. Circle N or S for north or south of the equator.

Longitude: Record the degrees and minutes of longitude at the time of the actual recovery of the animal. Circle E or W for east or west of the prime meridian.

Did turtle slide out/escape from gear? Circle Y for Yes or N for No. If the turtle had to be cut loose from the gear, then the correct answer is No.

Was turtle brought on board? Circle Y for Yes or N for No.

Identification (see Appendix A)

Species: Check the appropriate box which corresponds to the species of the captured turtle. With experience, sea turtles seen close up generally become easier to identify. See back of data sheet for identification criteria and Appendix A for more information.

Number of Photos Taken? Record the number of photos taken. Photograph every turtle! At least one picture must be taken illustrating the location of any attached gear. For those easily identified it is sufficient to take just one picture; for those with questionable id's at least 3 must be taken: dorsal, ventral, and frontal views, in addition to the gear photo. Try to photograph the top of the head of leatherbacks to record the "pink spot" and white markings for photo-id. These pictures will assist in understanding how the turtle interacted with the gear, better categorize the interaction for post hooking mortality, and provide information for reducing the interactions in the future, as well as provide confirmation of species id. For the first picture of every turtle on board, include the dive slate in the picture. Collection information should be written on the slate to identify the turtle: trip #, specimen #. We recommend that you also include the vessel name as part of the information. Be mindful of the minimum distance required to take clear pictures (depth of field). Most disposable cameras need a distance of at least 4 ft from your subject, otherwise the picture will be out of focus.

Condition of Turtle

Check the appropriate box that best corresponds to the condition of the turtle when it was recovered. In the notes section, record specific notes about any injury to the turtle.

Previously Dead: The turtle was already dead when it was captured.

Note: A **previously dead** turtle will usually have rotting tissue around the eyes and vents, and it may be bloated and foul smelling. It also may have sloughing scutes and scales. However, it may not smell, but will have rigor mortis.

Fresh Dead: The turtle does not smell and does not have rigor mortis. Likely it died as a result of the fishing operation. This includes comatose turtles that are not successfully resuscitated.

Comatose, Resuscitated: The turtle was brought aboard comatose but was successfully resuscitated. See resuscitation instructions in Appendix B of this section. **Note in the comments section the time it took for the turtle to respond and how long you were able to keep the animal on deck before release.

Alive, injured: The turtle is alive but is injured (e.g., hook captures). All hooked turtles are injured. Describe in detail how the turtle is hooked on the back of the form. Any lesion constitutes an injury.

Alive, uninjured: The turtle is alive and apparently is not injured (e.g., net captures or entangled in line) and there are no lesions.

Alive, injury unknown: The turtle is alive but the observer cannot determine if it was injured. This may happen when an animal isn't boated and the observer did not get a good view of the animal, but did know that the animal was alive.

Other (describe): The condition does not fit any category described above. Explain on back of form.

Unknown: The turtle was not observed and the condition is unknown. Explain on back of form.

If gear is a form of hook and line, complete this section, as applicable:

Hook Type: Circle or check "J" or Circle. If hook type is neither, select Other (describe).

Manufacturer/Style No. Write in the manufacturer and style number (e.g., Mustad #39968D).

Hook Size: Write in size of hook, (e.g., 9/0, 18/0).

Degree Offset: Write in the degree offset of hook (e.g., 0°, 5°, 10°).

Bait: Circle or check Squid, Mackerel, Sardine, Unknown or Other (describe).

Size: Write in the bait size. *If two baits involved, include both sizes. See examples below.* Using values recorded on the haul log for each bait kind, first calculate an individual bait weight (box weight/bait number) and round to nearest hundredth of a pound. Then, convert to grams (1 lb = 450 grams) multiplying by 450.

-Squid: 200lbs/400 baits = 0.50 lbs each $0.50 \times 450 = 225$ grams, record as 225 grams

-Mackerel: 300 lbs/ 400 baits = 0.75 lbs each $0.75 \times 450 = 337.5$ grams, record as 338 grams

-Sardines: 60 lbs/400 baits = 0.15 lbs each $0.15 \times 450 = 67.5$ grams, record as 68 grams

Caught on hook timer? Circle Y for Yes or N for No. If Yes, fill in time elapsed in space provided.

Was there a light stick on the hook? Circle Y for Yes, N for No, or U for Unknown. If Yes, circle the color of light stick.

Gangions to next light stick: If answer above was no, record the number of gangions to the **next** light stick (not necessarily nearest) and circle the appropriate color.

Number of gangions to next float: If a turtle is caught, record number of gangions to the **next** float (not necessarily nearest).

Hook location

If the turtle has been hooked, circle the specific location if it can be determined. If specific location cannot be determine, note the general location of the hook by checking the appropriate code box. Describe hook and its location in the notes section. Note if there is more than one hook involved. All hooks, except those deep in the esophagus or stomach, should be removed. Only swallowed hooks should not be removed, but any visible portion of them should be cut off and removed. (See Appendix F, F-5 Boated Animals for specific hook removing guidelines.) Indicate if the animal is **Not Hooked**, **Not Known if Hooked**, or **Hooked, but location is totally Unknown** and record details in the comments section. Otherwise follow the directions above for **Internal** or **External** hooks.

Internal: (circle the specific location, if known, and circle the general location if specifics not known)

Unknown, internal: The animal has been hooked internally, but the location cannot be determined. This may be the case when an animal cannot be boated.

Swallowed (esophagus): The turtle has “swallowed” the hook. The barb of the hook is lodged in the esophagus (or lower) and the barb is not visible. Part of the eye or shank may be visible in the open mouth and any visible portion of the hook should be removed. See description of the oral cavity in Appendix E.

Swallowed Hook Visible?: Please circle the furthest extent the hook is visible. Circle visible to insertion point, partially visible or the hook is not visible.

Beak/Mouth: The turtle is hooked in the beak internally or the mouth. Hook usually is easily visible, except those lodged in the back of the mouth. Describe hook and location in the notes section. Most hooks should be removed. See description of oral cavity in Appendix E and Careful Release Guidelines in Appendix F if unsure.

Note also the location of the hook in the jaw: upper, lower, side, or other, by checking the appropriate box. Circle specific location as it applies. If specific location listed does not apply then circle other. Example: If the turtle was hooked in the lower jaw but was not hooked in the tongue or glottis. Check the beak/mouth box, lower jaw and circle other. It was hooked somewhere other than the tongue or glottis in the lower jaw. Be as specific as possible, use notes section if necessary.

Internal: Unknown, internal
 Swallowed (Esophagus) **Hook visible?** Visible to insertion point / Partial hook / Not visible
 Beak/Mouth (note location in jaw and circle specific location) upper: soft palate/other lower: tongue/glottis/other
 side: jaw joint/other other (describe)

External (circle the specific location, if known, and circle the general location if specifics not known). All hooks should be removed.

Unknown, external: The animal has been hooked externally, but the location cannot be determined. This may be the case when an animal cannot be boated.

Beak/Head/Neck: The turtle is hooked in the neck or head, including the external beak area. Describe location in notes section. All hooks should be removed.

Carapace/Plastron: The turtle is hooked in its carapace or plastron. Describe location in the notes section. All hooks should be removed.

Front Flipper/Shoulder/Armpit: The turtle is hooked in its front limbs, armpits, or shoulders. Describe which side (right or left) is involved in the notes section. All hooks should be removed.

Rear Flipper/Groin/Tail: The turtle is hooked in its rear limbs, groin, or tail. Describe which side (right or left) is involved in the notes section. All hooks should be removed.

Was hook removed from this animal?: Circle Y for Yes, N for No, U for Unknown, or Not Applicable. If animal is 'Not Hooked' then choose Not Applicable. If animal is 'Not Known If Hooked', determine whether the hook was retrieved and answer Yes, No, or Unknown accordingly (even though it is not positive that the hook penetrated the animal).

All gear types complete this section, as applicable.

Was animal entangled in gear at capture? Circle Y for Yes, N for No, and U for Unknown.
At release? Circle Y for Yes, N for No, and U for Unknown.

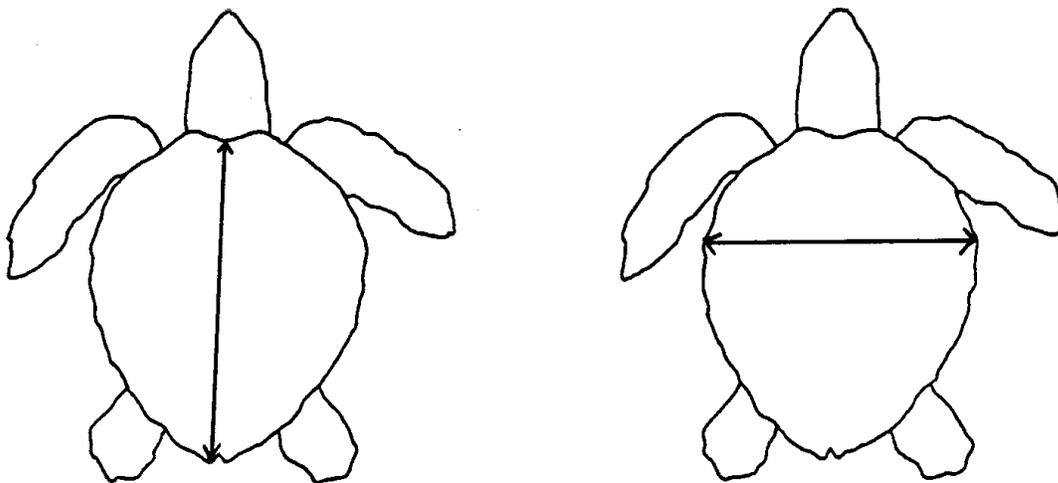
How much gear (linear feet) was left on turtle when released? Estimate or measure the amount of gear line left on turtle when released. For hook and line fisheries, this is the measurement of line from the eye of the hook, including crimp, left on the turtle. For lengths less than one foot, record the decimal fraction remaining. Record a zero if all line is removed. Attempts should be made to remove all gear, even on those animals in the water; long handled dehookers and line cutters should be used, if available.

BIOLOGICAL INFORMATION**Dimensions**

If the turtle cannot be brought on board, you will have to estimate its carapace length in feet.

Estimated Carapace Length (ft): Estimate length of turtle if not brought on board vessel. Note that in the past this has been an estimate in centimeters, but now the unit of measurement is feet.

If you bring the turtle on board, take the carapace measurements in centimeters, to the nearest 0.1 cm, using a tape measure (curved) and using calipers (straight). Standard measurements are illustrated below. Measurements over-the-curve (curved) follow the curvature of the carapace. If barnacles affect these measurements, record the details on the back of the form. Only curved measurements are taken on leatherbacks.



Carapace Length, curved, notch-to-tip (standard): Record the distance between the center of the nuchal scute and the end of the longest postcentral scute, following the curvature of the dorsal center line. See diagram. On leatherbacks the measurement is taken alongside (not over the top) of the vertebral (center) ridge.

Carapace Length, straight, notch-to-tip (standard): Record the distance between the center of the nuchal scute and the end of the longest postcentral scute. See diagram.

Carapace Length, straight, notch-to-notch (minimal): Record the distance between the center of the nuchal scute and the notch between the two postcentral scutes (not illustrated).

Carapace Width, curved: Record the maximum distance between the lateral edges of the carapace, measured over the curvature of the shell, perpendicular to the centerline of the carapace, at the widest point. See diagram. On leatherbacks the width is measured from side ridge to side ridge at the widest point.

Carapace Width, straight: Record the maximum distance between the lateral edges of the carapace. See diagram above.

Tags

Look for existing tags. Metal or plastic tags may be found on any of the four flippers. Living tags, created by surgically removing a small piece of the plastron and implanting it in the carapace, may appear in any of the lateral scutes, mainly on Kemp's ridley turtles. In addition, there may be two types of internal tags (wire and PIT) placed in the shoulders or front flippers. You will apply a PIT tag to the left front flipper, if no PIT tag is present already in either front flipper. We will not be concerned with wire tags here due to additional equipment requirements. If no rear metal flipper tags are present, you will apply inconel tags to both rear flippers.

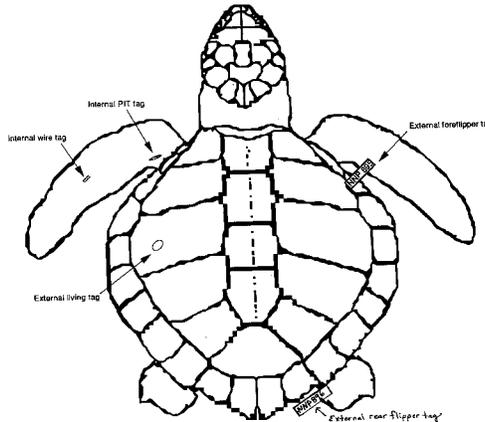
Generally, all turtles over 30 cm straight carapace length (SCL) should be flipper and PIT tagged if not already carrying tags. Turtles less than 20cm SCL only get PIT tagged. If the turtle measures between 20-30cm SCL then it is up to the observer to use their best judgement to determine if flipper tagging is appropriate. See the detailed tag application instructions in Appendix C.

Flipper Tag Number: Record the number of the tag already present or which is being applied. If the tag is already present record the return address of the tag in the comments section. If no tags are on the turtle and none are being applied, leave blank.

Tag Type: Metal [1] or Plastic [2]: Identify the type of tag appearing on or to be applied to the turtle. If no tags are on the turtle and none are being applied, leave blank.

Position: The tag may be on any of the four flippers. Observers should apply two tags, one to each rear flipper, if none already are present at that location. Record the location of the tag. If no tags are on the turtle and none are being applied, leave blank.

Left Front Flipper [LF]
Right Front Flipper [RF]
Left Rear Flipper [LR]
Right Rear Flipper [RR]



Already Present [1] or Applied by Observer [2]: Indicate whether the tag was already present or whether it is being applied by the observer. If no tags are on the turtle and none are being applied, leave blank.

Were Tags Removed?: Did you remove the tag? Circle Y for Yes or N for No. Any tags that were present prior to bringing the turtle on board, and that are getting hard to read or about to fall off, should be removed and, if taken from the rear flippers, replaced with new ones. The old tags should be collected and given to the Port Coordinator upon your return. If the existing tags are in good condition then leave them in place. If no tags are on the turtle, leave blank.

PIT Tag: Scan the 4 flippers and the shoulder and arm pit area with the PIT tag scanner. If a tag is found, record the 10 character alphanumeric code. If there is no PIT tag present in either of the front flippers, inject a PIT tag into the left front flipper and record the PIT tag number and also attach the PIT tag sticker to the data sheet. See detailed instructions in Appendix C. Record the position of any existing PIT tag or the position to which one is applied (LF) and note whether the tag was already present or applied by the observer. If no PIT tags are on the turtle and none are applied, leave blank.

Scanned? Note whether you scanned the flipper, shoulder, and armpit areas with a PIT tag scanner. Circle Y for Yes or N for No.

Living Tag: Indicate whether any living tags were present. Record details, including position, in comments section. Photograph the mark.

Other Tags: Indicate whether any other types of tags, such as satellite tags, were present or were attached. Record the tag number here if it has one. Record details, including position, in comments section. Photograph the tag.

Biopsy Samples

Biopsy Samples Taken? Biopsy samples for genetic analysis should be taken from all turtles (see Appendix D). Were samples taken? Circle Y for Yes, N for No or Unsuccessful for an unsuccessful attempt. List all samples taken in the comments section.

Release Information

Record the location (latitude and longitude) where the animal was released as well as the time and water temperature at that location. If the entire animal was returned to shore (salvaged or taken to holding facility) then leave blank.

Latitude: Record the degrees and minutes of latitude at the time of the actual release of the animal. Circle N or S for north or south of the equator.

Longitude: Record the degrees and minutes of longitude at the time of the actual release of the animal. Circle E or W for east or west of the prime meridian.

Time: Record the time of day (24 hr clock) when the turtle was released.

Water Temperature: Record the water temperature at the location where the turtle was released.

Date: Record the year, month, and day the turtle was released, if different from capture date.

Final Disposition

Record the final disposition (fate) of the turtle by checking the appropriate box:

Discarded Marked Carcass: All carcasses returned to sea should be spray painted or otherwise marked.

Discarded Unmarked Carcass: Carcass returned to sea unmarked.

Salvaged Carcass Indicate whether the carcass was salvaged and make notes in the comments section about what was salvaged and where it was taken. We must have a current CITES permit to return animals taken on the high seas.

Released Alive

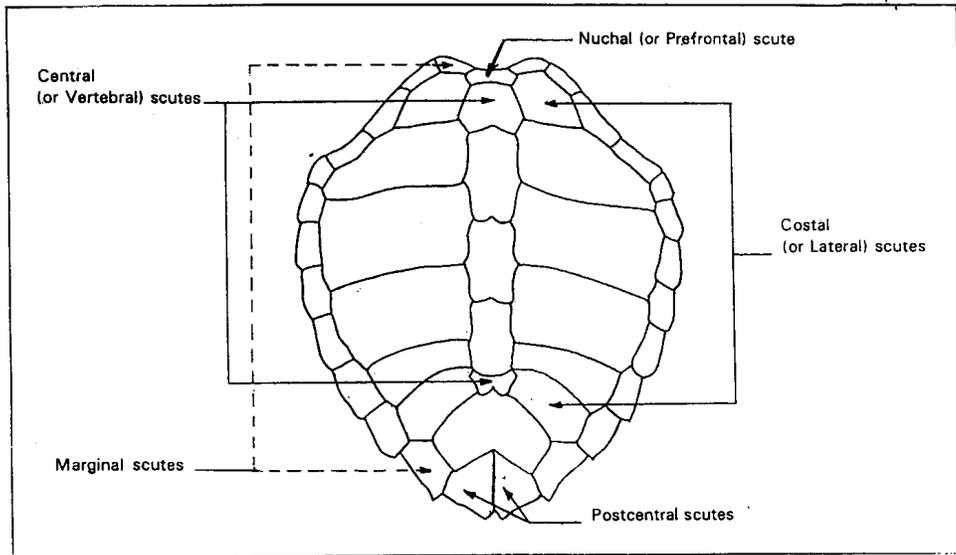
Taken to Holding Facility

Unknown (explain)

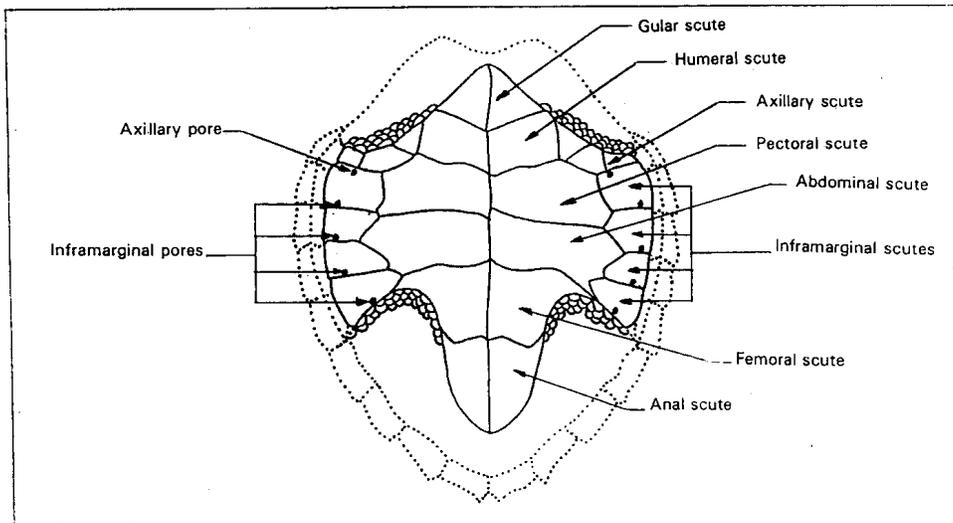
Additional Comments

Use this area to record any comments. Annotate the drawing to indicate any anomalies, location of living tags, etc. Also, be sure to list all biological samples collected. If resuscitation was attempted on any animal, please record all details in this section (such as length of time resuscitation was attempted, method(s) used, etc.).

Identification Criteria (See Appendix A)



Carapace of an olive ridley turtle (*Lepidochelys olivacea*) (Surinam specimen, scaled drawing by S. Handigman)



Plastron of an olive ridley turtle (*Lepidochelys olivacea*) (Surinam specimen, scaled drawing by S. Handigman)

Number of Left Lateral Scutes: Count and record the number of lateral (costal) scutes on the left side of the carapace.

Number of Right Lateral Scutes: Count and record the number of lateral (costal) scutes on the right side of the carapace.

Number Vertebral Scutes: Count and record the number of scutes on the midline of the carapace.

Number Left Inframarginal Scutes: Count and record the number of scutes on the turtle's left side of the plastron.

Number Right Inframarginal Scutes: Count and record the number of scutes on the turtle's right side of the plastron.

Overlapping Scutes: Are there overlapping scutes on the dorsal surface? Circle Y for Yes, N for No, or U for Unknown.

Inframarginal Pores: Are there pores on the ventral inframarginal scutes? Circle Y for Yes, N for No, or U for Unknown.

1 Pair Prefrontal Scales: Does the turtle have one pair of prefrontal scales? Circle Y for Yes, N for No, or U for Unknown.

Lacks Bony Shell: Does the turtle lack a bony shell? Circle Y for Yes or N for No.

Nuchal scute: Does the first nuchal scute touch the first lateral scute? Circle Y for Yes, N for No, or U for Unknown.

Dorsal Coloration: What is the dorsal coloration of the turtle? Check the most appropriate box or describe under other.

SPECIMEN COLLECTION REQUIREMENTS

If possible, **retain** dead sea turtles after processing for return to port. Consider the size of the sea turtle, and whether freezer space is available. Consider, also, species and size and sampling priorities. These priorities will be given to you by the observer/fishery coordinator. If animals were taken on the high seas, you must have a CITES permit to import the animal back to the United States.

If a sea turtle comes aboard dead and will be brought back to port:

- Leave all existing tags in place.
- Take three photographs; dorsal, ventral, and frontal views, in addition to gear interaction photograph.
- Complete Sea Turtle Life History Form.

Double bag and chill or freeze all retained. Each sample is to be individually tagged and labeled. The label is to be completed using only a “test scoring” pencil (#2). The label is to have the following information: trip number, specimen number, species, and sample identification (e.g., humerus). If many samples are collected from the same animal and placed into a common plastic bag, ensure that each part is properly tagged and labeled. Label the plastic bag with a large tag clearly stating its contents.

If you are importing a carcass from the high seas, notify the observer coordinator that you are returning to port when the date of docking is known, and no less than 48 hours.